

ART 31 AMEND

CLAIMS

1. Intervertebral disk prosthesis comprising at least three parts including a first plate, referred to as the upper plate (1), a second plate, referred to as the lower plate (2), and a core (3), the upper convex surface of the core (3) being in contact with at least part (10) of the lower concave surface of the upper plate (1) and the lower surface of the core (3) being in contact with at least part of the upper surface of the lower plate (2), and the upper plate (1) being movable at least with respect to the core (3), characterised in that there are cooperation means not located in the middle of the core between the lower plate (2) and the core (3), so as to limit or eliminate translation movements of the core (3) with respect to the lower plate (2) along an axis substantially parallel to the lower plate (2), and to limit or eliminate rotation movements of the core (3) with respect to the lower plate (2), around an axis substantially perpendicular to the lower plate (2), the planes passing through the upper (1) and lower (2) plates forming a substantially constant angle.

2. Intervertebral disk prosthesis according to claim 1, characterised in that the lower plate (2) comprises male means cooperating with female means of the core (3).

3. Intervertebral disk prosthesis according to claim 1, characterised in that the lower plate (2) comprises female means cooperating with male means of the core (3).

4. Intervertebral disk prosthesis according to any one of claims 1 to 3, characterised in that the angle is obtained in that the core (3) forms an acute angle in the front-rear direction (F).

5. Intervertebral disk prosthesis according to claim 4, characterised in that the same plates (1, 2) can be assembled with cores (3) of different thicknesses.

6. Intervertebral disk prosthesis according to any one of claims 4 or 5, characterised in that the angle between the upper (1) and lower (2) plates is between 0° and 15°.

5 7. Intervertebral disk prosthesis according to any one of claims 1 to 6, characterised in that the core (3) is movable with respect to the upper (1) and/or lower (2) plates, which makes it possible to compensate for positioning defects of the three parts (1, 2, 3) of the prosthesis with respect to each other.

10 8. Intervertebral disk prosthesis according to any one of claims 1 to 7, characterised in that at least part (10) of the lower surface of the upper plate (1) is concave and complementary to the upper surface (31) of the core (3).

15 9. Intervertebral disk prosthesis according to any one of claims 1 to 8, characterised in that the dimensions of each male means are slightly less than those of each female means so as to enable a slight clearance between the core (3) and the lower plate (2).

20 10. Intervertebral disk prosthesis according to any one of claims 1 to 8, characterised in that the dimensions of each male means are substantially the same as those of each female means so as to prevent any clearance between the core (3) and the lower plate (2).

25 11. Intervertebral disk prosthesis according to any one of claims 2 and 4 to 10, characterised in that the male means of the lower plate (2) are two pins (20) curved towards the inside of the prosthesis and located opposite each other on two edges (21, 22) of the prosthesis, and in that the female means of the core (3) are two recesses (30).

12. Intervertebral disk prosthesis according to claim 11, characterised in that at least one of the pins (20) is replaced by a lug equipped with a drilling (200) whereon a tag (23) using a dowel (24) entering the drilling (200).

30 13. Intervertebral disk prosthesis according to any one of claims 2 and 4 to 10, characterised in that the male means of the lower plate (2) are two

dowel pins (25) located in the vicinity of the centre of the lower plate (2), and in that the female means of the core (3) are two wells (35).

14. Intervertebral disk prosthesis according to any one of claims 2 and 4 to 10, characterised in that the male means of the lower plate (2) are two walls located opposite each other in the vicinity of two edges (21, 22) of the prosthesis, and in that the female means of the core (3) are recesses.

15. Intervertebral disk prosthesis according to any one of claims 2 and 4 to 10, characterised in that the male means of the lower plate (2) are a rib located at the centre of the prosthesis, and in that the female means of the core (3) are a groove.

16. Intervertebral disk prosthesis according to any one of claims 1 to 15, characterised in that the core (3) is made of polyethylene.

17. Intervertebral disk prosthesis according to any one of claims 1 to 16, characterised in that the lower plate (2) comprises one or more openings (28, 29) in the vicinity of its front side, provided to receive prosthesis anchoring means (4, 5) in a vertebra.

18. Intervertebral disk prosthesis according to claim 17, characterised in that the opening (28) of the lower plate (2) is rectangular, and in that the anchoring means (4) consist of a body (40), forming an acute angle with the lower plate (2), and a head (41).

19. Intervertebral disk prosthesis according to claim 17, characterised in that the openings (29) of the lower plate (2) are circular, and in that the anchoring means (5) are nail-shaped.

20. Intervertebral disk prosthesis according to any one of claims 1 to 19, characterised in that the upper plate (1) is convex on at least part of its upper surface to fit into the shape of the vertebrae.